REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 5-17, 19-32, 34-58 are pending in the present application. Claims 1, 7-9, 17, 24-26, 32, 35, 38-41, 45, 49-51 and 58 have been amended by the present amendment. ✓

In the outstanding Office Action, Claims 32 and 34-44 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 5-8, 13, 14, 17, 21-24, 29, 30, 32, 36-39 and 44 were rejected under 35 U.S.C. § 103(a) as obvious over JP 11-126387 (herein JP '387) in view of Nonoyama et al. or Applicants' Figure 3; Claims 19, 20, 34 and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claim 1 and in view of Novotny et al. and Applicants' Figure 3; Claims 45-50, 55 and 56 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP '387 in view of Nonoyama et al. and either Applicants' Figure 3 or Novotny et al.; Claims 9, 25, 40 and 51 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claims 1, 17, 32 and 45 in view of Yoshinari et al.; Claims 10, 26, 41 and 52 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claims 1, 17, 32 and 45 in view of Okubo; Claims 11, 12, 27, 28, 42, 43, 53 and 54 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claims 1, 17, 32 and 45 in view of Kikuchi et al.; Claims 15, 30 and 57 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claims 1, 17 and 45 in view of Takeuchi et al. or Novotny et al.; Claims 16, 31 and 58 were rejected under 35 U.S.C. § 103(a) as unpatentable over the art applied to Claims 1, 17 and 45 in view of Applicants' Figure 3; Claims 1, 5-10, 13 and 14 were rejected under 35 U.S.C. § 103(a) as obvious over JP '387 in view of Miyamoto et al.; Claims 17-26, 29, 32-42, 44-52 and 55-56 were rejected under 35 U.S.C. § 103(a) as unpatentable over Miyamoto et al. in view of Novotny et al.; Claims 11, 12, 27, 28, 42, 43, 53 and 54 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP

'387, Miyamoto et al. and Kikuchi et al.; Claims 15, 30 and 57 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP'387, Miyamoto et al. in view of Takeuchi et al. or Novotny et al.; and Claims 16, 31 and 58 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP '387 and Miyamoto et al. in view of Applicants' Figure 3.

Applicants thank the Examiner for the courtesy of an interview extended to Applicants' representative on May 20, 2003. During the interview, the differences between the claims and the applied art were discussed. No agreement was reached pending the Examiner's further review when a response is filed. Arguments presented during the interview are reiterated below.

Regarding the rejection of Claims 32 and 34-44 under 35 U.S.C. § 112, second paragraph, independent Claim 32 has been amended to omit "a light reflecting layer." Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1, 5-8, 13, 14, 17, 21-24, 29, 30, 32, 36-39 and 44 were rejected under 35 U.S.C. § 103(a) as obvious over JP '387 in view of Nonoyama et al. or Applicants' Figure 3. This rejection is respectfully traversed.

Independent Claims 1, 17, 32 and 45 have been amended to be similar to the original claims presented in this application. For example, independent Claim 1 is directed to an optical recording medium having a substrate, a recording layer formed on the substrate, a first protective layer formed on the recording layer and a transparent heat radiating layer formed on the first protective layer. The recording layer is exposed to light via a side at which the transparent heat radiating layer is positioned. Independent Claims 17, 32 and 45 include similar features.

In a non-limiting example, Figure 6 shows the substrate 61, the recording layer 64, the first protective layer 65 and the transparent heat radiating layer 66. It is noted the optical recording medium recited in independent Claim 1 advantageously provides a transparent heat

radiating layer that allows irradiating light to pass and dissipates heat buildup between an optical system and a recording layer.[1]

The outstanding Office Action indicates JP '387 shows a reflective layer 131 directly formed on a substrate 12. However, this feature has been omitted in independent Claim 1. In addition, JP '387 shows an optical disk that is discussed in the specification at page 4, line 8 to page 5, line 25, and shown in Figure 3. The optical disk disclosed in JP '387 has a protective layer 133 formed over a magnetic layer 132. However, JP '387 does not teach or suggest a transparent heat radiating layer formed on a recording layer such that the recording layer is illuminated with light via a side at which the heat radiating layer is positioned, as in amended Claim 1. As discussed in the specification at page 5, last paragraph, a conventional near field optical disk has a recording layer covered with a protective layer having a low heat conductivity. Therefore, the optical disk of JP '387 accumulates heat between an optical system and the recording layer causing a loss of signals or damage to the optical disk.[2]

Nonoyama et al. show in Figure 1, a substrate 2, a recording layer 4, a protective layer 5 and a reflective heat radiating layer 6 formed in this order. Because the reflective heat radiating layer 6 does not allow light to be transmitted (i.e., a reflective layer), the recording layer 4 cannot be illuminated with light via a side at which the heat radiating layer is positioned, as recited in Claim 1. As discussed during the interview, the recording layer 4 in Nonoyama et al. is exposed to light via the substrate 2 because the reflective heat radiating layer 6 has a function of reflecting light back to the substrate 2. In addition, Nonoyama et al. is silent about a transparent heat radiating layer.

[1] Specification, page 6, lines 1-5.
[2] Id.

Therefore, Nonoyama et al. do not teach or suggest an optical recording medium having a transparent heat radiating layer and a recording layer being exposed to light via a side at which the transparent heat radiating layer is positioned.

Furthermore, as discussed during the interview, a light beam in Nonoyama et al. has to traverse a relatively thick substrate layer. Therefore, the optical disk in Nonoyama et al. cannot be used in a near-field condition as required by JP '387. For this reason at least, there is no motivation on record to combine the teachings of JP '387 with those of Nonoyama et al.

Applicants' Figure 3 shows an optical disk with no transparent heat radiating layer. Therefore, Applicants' Figure 3 does not overcome the deficiencies noted above in regard to independent Claim 1.

Accordingly, it is respectfully submitted independent Claims 1, 17, 32 and 45 and each of the claims depending therefrom patentably distinguish over Nonoyama et al., JP '387 and Applicants' Figure 3.

Claims 45-50, 55 and 56 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP '387 in view of Nonoyama et al., Applicants' Figure 3 and Novotny et al.

As noted above, independent Claim 45 distinguishes over these references. Accordingly, it is respectfully requested this rejection also be withdrawn.

Claims 1, 5-10, 13 and 14 were rejected under 35 U.S.C. § 103(a) as obvious over JP '387 in view of Miyamoto et al. This rejection is respectfully traversed.

Miyamoto et al. show in Figure 1 various recording layers, heat diffusion layers, and protective layers disposed between two substrates 1 and 1'. In addition, reflective layers 8, 8', 9 and 9' are disposed between the substrates 1 and 1' and the recording layers 5 and 5', respectively, such that a light enters first the substrate 1 and then the recording layer 5, as discussed during the interview. Therefore, and as discussed during the interview, Miyamoto et al. do not teach or suggest a substrate, a recording layer formed on the substrate, a first

protective layer formed on the recording layer and a transparent heat radiating layer formed on the first protective layer such that the recording layer is exposed to light via a side at which the transparent heat radiating layer is positioned. To the contrary, Miyamoto et al. show in Figure 1 light entering through a substrate 1 or 1'. Accordingly, it is respectfully submitted independent Claim 1 and each of the claims depending therefrom patentably distinguish over JP '387 in view of Miyamoto et al.

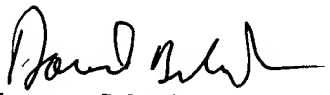
Regarding the remaining rejections of the dependent claims, it is respectfully submitted the additional secondary references of Novotny et al., Yoshinari et al., Okubo, Kikuchi et al., and Takeuchi et al. also do not teach or suggest the claimed invention.

Accordingly, it is respectfully requested the rejections of the dependent claims also be withdrawn.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER AND NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Attorney of Record
David A. Bilodeau
Registration No. 42,325

22850
Tel.: (703) 413-3000
Fax: (703) 413-2220
GJM:DAB:RFF/bwt
I:\ATTY\RFF\20s\203761\203761US-AME4.DOC